Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Communications Assistance for Law Enforcement Act and Broadband Access and Services	)	ET Docket No. 04-295
	)	RM-10865
	)	
	)	FCC 05-153
	)	

To: The Commission

COMMENTS OF CORNELL UNIVERSITY

The Federal Communications Commission ("Commission") has found it to be in the public interest to deem facilities-based providers of broadband Internet access to be "telecommunications carriers" subject to the requirements of the Communications Assistance for Law Enforcement Act ("CALEA").[1] However, Cornell University neither believes that its network system falls under the definition of a data

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[1] *See Communications Assistance for Law Enforcement Act and Broadband Access and Services,* ET Docket No. 04-295 (Rel. Sept. 23, 2005), *published* 70 Fed. Reg. 59,664 (Oct. 13, 2005) ("*Broadband CALEA Order*").

network nor holds that it is appropriate for Cornell, or other higher education institutions, to have to comply with this regulation.

I. CALEA ONLY APPLIES TO COMMON CARRIERS

CALEA compliance should not be required of Cornell University and other institutions of higher education because they operate private networks and are not common carriers for hire. Imprecise wording in the Commission's October 13, 2005 Final Rule (Final Rule) has resulted in potentially overbroad statements regarding the reach of CALEA.

Section 103 of CALEA provides:

"... a telecommunications carrier shall ensure that its equipment, facilities, or services that provide a customer or subscriber with the ability to originate, terminate, or direct communications are capable of [a list of required forms of assistance to law enforcement]"

CALEA defines "telecommunications carrier" as follows:

Sec. 102. DEFINITIONS.

(8) The term "telecommunications carrier"--

(A) means a person or entity engaged in the transmission or switching of wire or electronic communications as a common carrier for hire; and

(B) includes--

(i) a person or entity engaged in providing commercial mobile service (as defined in section 332(d) of the Communications Act of 1934 (47 U.S.C. 332 (d)); or

(ii) a person or entity engaged in providing wire or electronic communication switching or transmission service to the extent that the Commission finds that such service is a replacement for a substantial portion of the local telephone exchange service and that it is in the public interest to deem such a person or entity to be a telecommunications carrier for purposes of this title; . . .

47 U.S.C §1001 [emphasis added]

The structure of the statutory definition and the use of the word "and" logically requires that the first set of prerequisites i.e., "as a common carrier for hire," be satisfied in all cases.

The Commission asserts that the broad Congressional intent of CALEA was to preserve -- and not expand -- the government's surveillance capabilities in the face of changing technologies.[2] The wording of the Final Rule would appear to bring Cornell within the

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[2] See, H.R. Report #103-827(I) 1994 ("the purpose of H.R. 4922 is to preserve the government's ability, pursuant to Court Order or other lawful authorization, to intercept communications involving advance technologies such as digital or wireless transmission modes . . ."

ambit of regulations that never before applied to it as the operator of a private network by fundamentally altering the statutory definition of a "telecommunications carrier" and arrogating to the Commission vastly expanded regulatory authority.

At ¶19, the Final Rule concludes: "In this Section, we find that facilities-based providers of any type of broadband Internet Access Service . . . are subject to CALEA." The erroneous foreshortening of the requisite analysis is repeated in the section addressing VoIP: "We find that providers of interconnected VoIP satisfy the three prongs of the SRP under CALEA's definition of "telecommunications carrier."

While the Final Rule concludes that the definition of "telecommunications carrier" is broader under CALEA than under the Communications Act, the only difference discussed is with respect to the Substantial Replacement Provision (SRP) (sec.102(8)(B)(ii)). That provision addresses the functional equivalence of technologies, i.e., "commercial mobile service" or "replacement for a substantial portion of the local telephone exchange" and not the status of the service provider. The first part of the definition of "telecommunication carrier" -- Section 8(A) (the "common carrier for hire" requirement) should still have to be

satisfied when an SRP analysis is performed.[3] By failing to do so, the Commission appears to have grossly overstated the reach of CALEA.

The plain statutory language compels the conclusion that the person or entity engaging in the surrogate communication service must also ("and") be engaging in such activity "as a common carrier for hire." If Cornell is not providing services for hire, it should be exempt from CALEA. We also submit that an entity cannot be construed to be a substitute for a substantial portion of the local telephone exchange (a common carrier) without also offering communication services as a common carrier to those customers.

Cornell University, like many other colleges and universities, provides telecommunications services to students, faculty and staff in order to satisfy its educational and research missions. It is not offering such service "for hire" or in the capacity of a "common carrier." We therefore ask the Commission to remedy the existing confusion and ambiguity and expressly declare CALEA inapplicable in such entities.

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[3] See *Communications Assistance for Law Enforcement Act,* CC Docket No. 97-213, *Second Report and Order*, 15 FCC Red 7105 (2000), at 7110, ¶9: "The definition of 'telecommunications carrier' includes such service providers as local exchange carriers, interexchange carriers, competitive access providers, cellular carriers, providers of personal communications services, satellite-based service providers, cable operators, and electric and other utilities that provide telecommunications services for hire to the public, and any other wireline or wireless service for hire to the public." *Id.* at 7111, ¶10, *citing* 140 Cong. Rec. H-10779 (daily ed. October 7, 1994) (statement of Rep. Hyde) (emphasis added).

CALEA does not apply to private networks.

Congress expressly excluded "private networks" from CALEA's reach. Section 103(b)(2)(B)[4], 47 U.S.C. § 1002(b)(2). The August 9, 2004 Notice of Proposed Rulemaking and Declaratory Ruling (NPRMDR) acknowledged this limitation at paragraph 10: "there are certain limitations on the assistance capability requirements in Section 103(a) [of CALEA]. For example, they do not apply to information services or equipment, facilities or services that support the transport or switching of communications for private networks . . ." [citing 47 U.S.C. § 1002(b)(2)].

While the NPRMDR asked for comment on when a private network may be too big to be deemed truly private based on an "availability to all users"[5], this topic is not even addressed in the

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[4] **Section 103 (b) LIMITATIONS** provides:

(2) INFORMATION SERVICES; PRIVATE NETWORKS AND INTERCONNECTION SERVICES AND FACILITIES - The requirements of subsection (a) do not apply to --

. . .

(B) equipment, facilities, or services that support the transport or switching of communications for private networks or for the sole purpose of interconnecting telecommunications carriers.

[5] The Commission stated at footnote 113 to the NPRMDR "we also remind commenters that even when defining the 'public' for purposes of applying the Communications Act Title II requirements to telecommunication carriers, courts and the Commission have recognized that the 'public' need not include everyone and carriers offerings may be limited to only certain categories of users and still be considered available to the 'public.' See National Association of Regulatory Utilities Commissioners v. FCC, 525 F.2d. 630, 642 (DC Cir. 1976)."

October 13, 2005 Final Rule. Cornell's private network has a limited number of users. It is far smaller than the networks of many corporate entities and in no way approaches the outer boundaries of what might be considered a private network under existing precedent.

Paragraph 27 of the Final Rule provides "we conclude that establishments that acquire broadband Interest Access Service from a facilities-based provider to enable their patrons or customers to access the Internet from their respective establishments are not considered facilities-based broadband Internet Access Service Providers subject to CALEA." This would appear to clearly cover university-provided Internet access to its faculty, staff and students. There being no further discussion of this issue in the record, and the Commission having articulated no basis upon which to reverse this conclusion, it would, presumably, be incorporated into the Final Rule. Such an outcome is, however, belied by the inconsistent concurrent request that providers of broadband networks for educational and research institutions file comments to justify an exemption from CALEA.

Cornell and other colleges and universities were not provided a meaningful opportunity to comment on the profound changes enacted in the Final Rule.

The NPRMDR failed to provide notice of the fact that the Commission was contemplating an expanded reading of CALEA that would eliminate the concept of common carrier from the definitions of telecommunications carrier. It therefore deprived many potentially affected entities from the opportunity to provide meaningful comment on that proposal.

The NPRMDR used the terms "telecommunications carrier" and "common carrier" interchangeably. See, e.g., ¶17 Implementation, the August 9, 2004 NPRMDR ¶22 and footnote 55 thereto (regarding system security and integrity requirements) and ¶23 regarding cost recovery "by common carriers"). These usages demonstrate an assumption that all telecommunications carriers subject to CALEA would be common carriers.

The statement in the August 9, 2004 NPRMDR of the position that the Commission was proposing to adopt, and upon which comment was sought, retained the status of common carrier as a prerequisite to CALEA applicability. At paragraph 47, the Commission stated its tentative conclusion as follows:

> . . . we tentatively conclude that facilities-based providers of any type of broadband Internet access . . .

whether provided on a wholesale or retail basis, are subject to CALEA. (emphasis added)

Similarly, at ¶56, the Commission preserved the common carrier notion in the statement of its tentative conclusion: "we tentatively conclude that providers of managed VoIP Services, which are offered to the general public . . . are subject to CALEA" [emphasis added]. [6]

Finally, at footnote 133 of the NPRMDR, the Commission reassuringly stated:

> We note that establishments acquiring broadband Internet access to permit their patrons to access the Internet do not appear to be covered by CALEA (assuming they were otherwise "telecommunications carriers" under CALEA). Examples of these entities include schools, libraries, hotels, coffee shops, etc. . . .

The Commission's broad interpretation of CALEA potentially conflicts with the Family Education Rights and Privacy Act (FERPA).

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[6] See also, footnote 80, the Commission stated "we clarify that some entities that sell or lease mere transmission facilities on a non-common carrier basis, e.g., dark fiber, bare space segment capacity or wireless spectrum, to other entities that use such transmission capacity to provide broadband internet access service, are not subject to CALEA under the Substantial Replacement Provision as Broadband Internet Access Providers." (emphasis added) --indicating that the common carrier requirement remains.

Institutions of higher education are under the Family Education Rights and Privacy Act, 20 U.S.C. §1232g which obligates them to protect education records from disclosure except in conformance with the dictates of that federal statute. It is quite possible that some of the communications sought by law enforcement under the auspices of CALEA would constitute "education records" as that term is broadly defined in FERPA, i.e. identifiable to an individual student and maintained by the educational institution. The proposed regulation would, in effect, circumvent FERPA and its requirement that notice be provided to a student before education records are released, even when such release is pursuant to a subpoena. This inconsistency with the intent and purpose of FERPA must be resolved through legislation as was done in the case of the USA PATRIOT Act and cannot be dealt with through regulatory interpretation. Other federal privacy legislation, such as the Health Insurance Portability Accountability Act, and the Financial Services Act is also implicated in this problem, although less significantly than educational records under FERPA.

In conclusion, the proposed re-interpretation of CALEA goes beyond the intent of the statute that the Commission purports to be

implementing and is therefore beyond the authority of the FCC to impose through rulemaking.

II. IT IS INAPPROPRIATE TO EXPECT AN EDUCATIONAL AND RESEARCH INSTITUTION TO COMPLY WITH THE TECHNICAL REGULATIONS OF AN AMENDED CALEA.

We believe that educational and research institutions should be exempt from CALEA because as drafted these provisions could impose undue burden, and, as a measure of that undue burden, costs disproportionate to the goal of the regulation. Cornell University has always provided prompt compliance with legal papers for electronic communications. University personnel always have been and will remain available to respond to requests in a timely fashion.

The regulation is unclear as to what the scope, technical modifications and burden of full compliance entails for higher education.

As currently drafted the regulations create uncertain meaning about the scope of technology required for compliance. If the intent of the regulations is for the Department of Justice to effectively capture electronic communications from Cornell's data network at its connection to the commodity Internet, then regular refresh technology will accomplish this goal without undue technological or financial burden on the university. These standard upgrades are then in keeping with the university's history of ready compliance to properly served compulsory legal papers requesting electronic communications. Cornell

University does not require unfunded CALEA mandates in order to accomplish this goal, and therefore should be exempted from it.

However, if the intent of the regulations is to require more internally ubiquitous modifications of the university's Intranet, then the regulation likely becomes technologically infeasible and financially burdensome. As a practical matter it is nearly impossible to establish technologies that would provide automatic and remote access to traffic on the thousands of individual devices connected throughout the packet-switched, wired network at Cornell while maintaining, as CALEA requires, the assured privacy of all those using the network and not under investigation. Not only do the configurations of the various subnets that run upon the backbone system present specific challenges to the goal of remote, real-time surveillance, but the protocols and operation standards upon which packet switching technologies increasingly rely compound the surveillance problem. For example, the widely used dynamic host configuration protocols often utilize a pool of Internet Protocol addresses that are dynamically assigned to individuals to establish network connections. Therefore an Internet Protocol address is not an effective proxy to preemptively identify communications of an individual and will not be the full representation of an individual's actual use of data communications networks.

Unlike telephony, where a dedicated shared line may be tapped to capture communications, data networking interconnects dynamic and diffuse technologies at both the physical and logical layer.

Therefore it is unreasonable to expect existing technologies, no matter how deeply deployed in the internal data networking system to accomplish the surveillance goals that law enforcement has achieved for traditional telephone communications. In short, surveillance technologies for Intranet data networking are unable to achieve the same degree of singular, precise and surgical surveillance currently practicable for PBX telephony systems.

If the intent is to require ubiquitous modifications of the university's Intranet, the cost of attempting to comply with a regulation that establishes an unachievable and poorly conceived standard, represents undue legal and financial burden on Cornell University. If technology does not exist to achieve the goal, then the University may be confronted with unwarranted and inequitable legal liability. If the second interpretation is the intent of the regulation, then it also presents a financial burden that differs from the first interpretation by several orders of magnitude. Unlike commodity networks, which can pass the costs of legislative requirements down to their customers, not-for-profit institutions like Cornell University cannot so readily absorb unfunded mandates, especially ones with such an uncertain outcome. In this case, the interpretation of the regulation is unclear. The technical means to comply may not even exist. No matter how much money is pressed into a good faith attempt to obey the regulation the goal may not be able to be achieved. It is unfair to expect a not-for-profit educational institution to spend scarce and precious funds on potential chimeras.

Further, the vagaries of the technical requirements of this regulation set against the fundamentally insecure nature of Internet protocols do not instill confidence that such a system is or could be made to be appropriately secure. This technical fact contrasts sharply with the protection the law affords the material under warrant and therefore invites an argument from technical security and privacy considerations as well. (Although important, a discussion of civil liberties privacy concerns involved in the tension between the newer data networking technologies and the Fourth Amendment framework of the Electronic Communications Privacy Act, amended by the USA Patriot Act, is omitted from this comment.)

Moreover, as a target for "hackers," this system could well add to the substantial challenges that the university already faces in addresses matters of Internet security. In short, this system could create a new class or quantity of vulnerabilities. Until the government provides clear technical specifications that could be warranted to guarantee the security of those communications, this regulation exacerbates the university's liability. It does not take much imagination to envision that this regulation could make compliance with legal and other regulatory responsibilities stemming from privacy laws such as the Family Educational Rights Privacy Act, Health Insurance Portability Accountability Act or the Financial Services Act, as well as the state, and perhaps even future federal data breach notification laws exceptionally difficult. Thus, this regulation raises technical security issues that act as both a symptom and a cause of the problem. Vaguely drafted, this proposal presents an uncertain picture

of the government's technical security program to preserve the privacy of the communications under warrant. That lack of clarity could result in additional vulnerabilities for the Cornell network system, as well as compounded liabilities as it attempts to comply with existing and future privacy legislation.

Government oversight of new data networking technologies hinders innovation and contravenes the research mission of higher education institutions.

Finally, the regulations require that the Department of Justice review the deployment of all future technologies for compliance with its surveillance goals. This regulation suggests an unprecedented and extraordinary degree of oversight on the part of the federal government that portends to have a profoundly deleterious effect on the missions of a research and teaching university. Higher education, unlike virtually all other infrastructures, uniquely relies upon open, unimpeded inquiry for the pursuit of knowledge. Cornell University cherishes this mission as a part of its institutional identity and contributions to American society. Cornell University was among some of the select research institutions involved with the Department of Defense and National Science Foundation that helped to develop the Internet. The Internet as we know it may well never have been developed if such oversight as is suggested by this regulation were a component of the research conducted by computer scientists and engineers in the founding era of the Internet. This limited oversight contravenes the very core of the research enterprise. It augurs ill for future innovation upon which this country relies to remain economically vibrant and globally competitive.

The procedures that the Commission should adopt for exempting entities.

Cornell University already provides timely response to compulsory legal papers for electronic communications. As an exempted institution, it would continue to respond appropriately to law enforcement requests. As an exempted entity, it would also expect that the current period of compliance under the regulation of eighteen-months be extended to a full four years. In that time Cornell University will conduct regularly scheduled technical upgrades at the commodity Internet connection that augment compliance with law enforcement requests for capture of electronic communications without undue financial burden to the institution.

III. CONCLUSION

This regulation is inappropriate to the educational and research environment of Cornell University. First, Cornell University is not a common carrier, and therefore does not fall under the scope of CALEA. Second, unclear drafting creates any number of possible outcomes. The regulation could entail unnecessary and untimely compulsory technological alterations. The university will accomplish those same goals in time without the regulation and without undue financial burden expended in order to meet expedited deadlines. Alternatively, this regulation could be interpreted to encompass technologically infeasible goals that would result in unwarranted legal and financial liabilities. Finally, the oversight aspect of the regulation could generate a chilling effect on research. Therefore, institutions of higher

education generally, Cornell University in particular, should be exempt from CALEA.

Respectfully submitted,

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CORNELL UNIVERSITY

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